Remote Sensing Applications Division (RSAD)

CDR Program Office

Weekly Report for Sep 19, 2014
Ed Kearns, Chief

Status	CDR	PI/TM	Assessment		Deliver Drafts						Review and Provide Feedback						Deliver Final Versions						Misc		Archive			Release		
			Assemble IPT	Perform Assessment	Deliver source code sample and README draft	Deliver Flow Diagram Draft	Deliver C-ATBD Draft	Deliver Maturity Matrix Draft	Deliver Sample netCDF dataset	Deliver SA Draft	Provide feedback on source code and README	Provide feedback on Flow Diagram Draft	Provide feedback on C-ATBD Draft	Provide feedback on Maturity Matrix Draft	Provide feedback on Sample netCDF dataset	Provide feedback on SA Draft	Deliver final source code and README	Deliver final Flow Diagram	Deliver final C-ATBD	Deliver final Maturity Matrix	Deliver final netCDF dataset	Deliver final SA	Create Collection Level Metatdata	Conduct Security Review	Archive Code Package	Archive Docs	Archive Data	Make data publicly available	Put data, docs, and code on dev web page	Conduct ORR
1	Ozone - ESRL	Rosenlof Young	x	x	20-May	12-Jun	20-Mar	20-Aug	30-Oct 4-Apr	12-Jun	12-Jun	26-Jun	27-Mar	21-Aug	6-Jan 12-Jun 5-Aug	21-Aug		21-Aug	19-Aug	11-Sep										FY15
2a	SST - WHOI	Clayson Peng	x	21-Feb	12-Dec	3-Apr	20-May	19-Feb	25-Nov	8-Aug	16-Dec	8-Aug	6-Jun		13-Dec	13-Aug														FY15
2b	Ocean Surface Properties	Clayson Peng	x	21-Feb	12-Dec	3-Apr	20-May	19-Feb	25-Nov	8-Aug	16-Dec	8-Aug	6-Jun		13-Dec	13-Aug														FY15
2c	Ocean Heat Fluxes	Clayson Peng	x	21-Feb	12-Dec	3-Apr	20-May	19-Feb	27-Jun	8-Aug	16-Dec	8-Aug	6-Jun		8-Aug	13-Aug														FY15
3a	Cryosphere (APP FCDR)	Key Young	13-Jun	IP 20-Dec	3-Jun		20-Mar	12-Mar	12 Mar 27 Jun		27-Aug		25-Apr	20-Mar	25-Apr															FY15
3b	Cryosphere (APP-x TCDR)	Key Young	13-Jun	IP 20-Dec	3-Jun		20-Mar	12-Mar	12 Mar 27 Jun		27-Aug		25-Apr	20-Mar	25-Apr															FY15
4a	AVHRR FCDR (5 CHs)	Minnis Young	x	22-Nov		14-Feb	31-Dec 28-Mar	7-Feb	14-Feb	20-Dec 31-Jul		21-Feb	13-Feb 2-Jun	14-Feb	18-Feb	19-Jun					1TB /day						60 TB CLASS			FY15
4b	AVHRR Cloud Properties - NASA	Minnis Young	x	22-Nov		14-Feb	31-Dec 28-Mar	7-Feb	14-Feb	20-Dec 31-Jul		21-Feb	13-Feb 2-Jun	14-Feb	18-Feb	19-Jun					1TB /day						60 TB CLASS			FY15
5	Vegetation (LAI/FAPAR)	Vermote Matthews	x	17-Jan	24-Jun	2-Jul	10-Sep	10-Sep	16-Jul	6-Nov	29-May	9-Jul	17-Sep	11-Sep		8-Nov		1-Nov												FY15
6a	Cloud Top Pressure	Menzel Young	x	31-Jan	1-Oct	5-Aug	15-May	5-Aug	21-Oct 11-Jul 25-Jul		29-Oct	29-Oct	29-Oct 10-Jan		4-Nov 24-Jul						NCDC creating									FY15
6b	Total Precipitable Water	Menzel Young	x	31-Jan	1-Oct	5-Aug	15-May	5-Aug	21-Oct 11-Jul 25-Jul		29-Oct	29-Oct	29-Oct 10-Jan		4-Nov 24-Jul						NCDC creating									FY15
7a	Total Solar Irradiance	Pilewskie Inamdar	x	6-Mar	22-Jan	26-Mar		26-Mar		Approved to Archive	9-May																			FY15
7b	Solar Spectral Irradiance	Lean Inamdar	x	6-Mar	22-Jan	26-Mar		26-Mar		Approved to Archive	9-May																			FY15
8	GPCP Monthly	Adler																												FY15
9	NEXRAD	Nelson Nelson			See	Project	Quad	Chart																						FY15
10	CMORPH	Xie Prat	x																											FY15
11	ISCCP	Rossow Knapp	x	x	See	Project	Quad	Chart																						FY15

9/19/2014 ● = Complete ● = Working ● = On Hold due to resources

Status	CDR	PI / TM		Assessment			Deliver Drafts						Review and Provide Feedback						Deliver Final Versions						Misc		Archive			Release		Conduct ORR
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1	Ozone - ESRL	Rosenlof Young	**1) Final documents (C-ATBD, Flow Diagram and MM) in Library; Flyer drafted; UESB presentation complete; working ORR Checklist**	FY15
2a	SST - WHOI	Clayson Peng	2a) Received sample data for 2001, data looks good	FY15
2b	Ocean Surface Properties	Clayson Peng	2b) Waiting on final C-ATBD and a few details discovery metadata	FY15
2c	Ocean Heat Fluxes	Clayson Peng	2c) Completed processing, tested sftp, **DSRR scheduled for 10/01**	FY15
3a	Cryosphere (APP FCDR)	Key Young	3a) Feedback sent on metadata	FY15
3b	Cryosphere (APP-x TCDR)	Key Young	**3b) Reviewing both daft C-ATBDs**	FY15
4a	AVHRR FCDR (5 CHs)	Minnis Young	4a) SA draft complete, review/coordination in progress, PI will push up to 1TB/day to ftp4 using sftp	FY15
4b	AVHRR Cloud Properties - NASA	Minnis Young	**4b) IR calibration issue it to difficult (postponed to future enhancements and annotated in C-ATBD)**	FY15
5	Vegetation (LAI/FAPAR)	Vermote Matthews	5) PI needs OLE code from U of Miami to create their daily operational code; **received draft C-ATBD and MM**	FY15
6a	Cloud Top Pressure	Menzel Young	6a) ATRAC request for L1B PATMOS input data (12.5 TB), **Draft SA submitted for review**	FY15
6b	Total Precipitable Water	Menzel Young	6b) Received sample data, it's looking good; final dataset (3 TB)	FY15
7a	Total Solar Irradiance	Pilewskie Inamdar	7a) PI working on C-ATBD, due by end of Sep	FY15
7b	Solar Spectral Irradiance	Lean Inamdar	7b) Received sample data, needs a lot of work; ATRAC request complete	FY15
8	GPCP Monthly	Adler	8) PI briefed product to CSMD and RSAD	FY15
9	NEXRAD	Nelson Nelson	9) See Project Quad Chart	FY15
10	CMORPH	Xie Prat	10) On Hold	FY15
11	ISCCP	Rossow Knapp	11) See Project Quad Chart	FY15

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			Assessment		Deliver Drafts						Review and Provide Feedback						Deliver Final Versions						Misc		Archive			Release		
12	NRT Sea Ice Concentration	Fetterer Peng	x	PI says NO deliverables	**12) Had telecon with PI; Tom agreed to let them use current funds to modularize existing code, then do NRT in FY15 via a subcontract to GST**																									FY16
13a	Hydorogical Bundle	Ferraro Nelson																												FY16
13b	AMSU-A FCDR	Ferraro Nelson																												FY16
13c	AMSU-B FCDR	Ferraro Nelson																												FY16
14	Sea Level	Callahan Zhang																												FY16
15	Mean Layer Temperature - NOAA	Zou Semunegus																												FY16
16	Tropospheric Height	Ho Shi																												FY16
17	Surface Albedo	Matthews																												FY17
18	UTH Related FCDR	Lou																												FY17
19	AVHRR + HIRS Cloud TCDR	Heidinger Knapp																												FY17
20	ISCCP Enery Budget	Zhang																												FY17
21a	GPCP Daily	Adler																												FY17
21b	GPCP Pentad	Adler																												FY17
22	Ozone	Long																												FY17

9/19/2014

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Name of CDR	C-ATBD	Data Flow Diagram	Maturity Matrix	VDD	Source Code	NetCDF sample	Dataset	Request to Archive	Approved for Archive	SA	DSRR
CDRP Open Change Requests											
Geostationary IR Channel Brightness Temperature - GridSat B1	Returned to PI with edits	Needed, TBD	Needed, TBD	N/A	√	√	√	√	√	√	Aug-13
Sea Surface Temperature - Pathfinder	Returned to PI with edits	No change	No change	√	√	√	Having QA issues, will not be delivered until end of CY 2014	√	√	Needed, TBD	Needed, TBD
Mean Layer Temperature - UAH	31-Jul	31-Jul	N/A	Needed, TBD	10-Aug	10-Aug	Needed, TBD	Needed, TBD	Needed, TBD	Needed, TBD	Needed, TBD

SSMI(S) – RSS: PI submitted suggested metadata updates, routed CR for approval
        (Hilawe, Ken, and Tom have to approve changes before it goes to the CCB)

Other: Discuss status of Use Agreement new wording

GST FY14 Subcontracts

PI	CDRs	Start Date	End Date	WA Complete	Sent to Institution for Review	Sub-contract in place
Christy	Mean Layer Temperature - UAH	15-Sep-14	31-Mar-15	√	√	√
Ho	- Mean Layer Temperature - UCAR (Lower Stratosphere) - Mean Layer Temperature - UCAR (Troposphere and Stratosphere) - Tropopause Height Climatology	17-Sep-14	31-Mar-15	√	√	
Robinson	Snow Cover Extent (Northern Hemisphere)	11-Sep-14	31-Mar-15	√	√	√
Sorooshian	Precipitation - PERSIANN-CDR	1-Aug-14	31-Mar-15	√	√	√
Zhang	ISCCP Radiation Budget	1-Aug-14	31-Mar-15	√	√	√
Wentz	SSMI(S) Brightness Temperature - RSS	14-Sep-14	31-Mar-15	√	√	√
Mears	Mean Layer Temperature - RSS	14-Sep-14	31-Mar-15	√	√	√

Weekly Report

NNR – NOAA NEXRAD Reanalysis
- Assessment of Bias at Hourly for 2 months (4 years)
- Assessment of Bias at Daily scale for 4 years (2008 - 2011)
- Gauge radar merging for one year (2011)
- **2005 radar only processed**
  Level II data for 2003 is being transferred.
  Level II data for 2005 is being transferred.
- **Ordered Level II data for 2012, 2005, 2003**
- **Processed 4 yrs of data for COOP-NNReanalysis data.**
- **Obtained COOP, HADS, and CRN data and process gauge –radar pairs for analysis.**

Gantt chart timeline (Feb-13 to Jul-15):
- Process Data - NMQ and WDSS II
- Transfer Data to and from NSSL
- In Situ Precipitation Prep
- Bias Adjustment R&D
- Apply Adjustment
- Verfication
- BAMS Paper and Climate Analysis
- ATRAC/Archive Process
- Access

Risk Matrix

Consequence (y-axis, top to bottom):
- Will not meet metric
- Significant delays
- Moderate Impact
- Slight sched deviation
- Minimal Impact

Probability of occurrence (x-axis): 0, 20, 40, 60, 80, 100

Risk and Mitigation

No Risk at this time
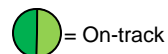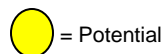
PREDECISIONAL DRAFT INFORMATION

9/18/2014

= On-track   = Potential management action required   = Management attention required
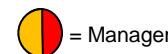
CDR Program Office
ISCCP Processing @ NCDC

Project Manager:
A. Young/K. Knapp

Weekly Status Update

- Continuing to pre-process data.
- Ordering replacement data from EUMETSAT
- Sent beta data to users for feedback.
- Preparing ancillary calibration data for processing.
- Working on ISCCP Website for NCDC
- Preparing data for Beta users (preliminary output)
- Prepared space and scripts for ISCCP processing on CICS server.
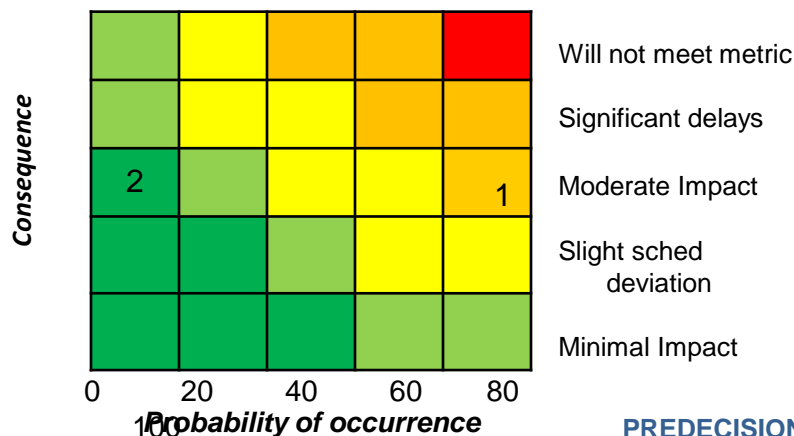- Received pre-processing software to QC input files (GEO/B1 & LEO/AVHRR)

Objectives

Produce ISCCP cloud products at NCDC following IOC R2O procedures. Plan for routine updates to follow.

Schedule

- Start Date — 1983? 2003? 2013?
- Begin processing — September 2014
- End processing — December 2014
- QC & Analysis — Jan-Feb 2015
- Archive — March 2015
- Routine updates start — June 2015

Risk Matrix

Consequence (y-axis, top to bottom):
- Will not meet metric
- Significant delays
- Moderate Impact
- Slight sched deviation
- Minimal Impact

Probability of occurrence (x-axis): 0 20 40 60 80 100

Risk 2 plotted at low probability / Moderate Impact
Risk 1 plotted at high probability / Moderate Impact

Risk and Mitigation

1. Delivery of software late and other delays. Raised level to moderate impact. Processing will likely start 1 month late. Impact upon completion isn't yet clear.
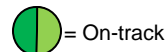
2. CICS server space

PREDECISIONAL DRAFT INFORMATION

= On-track   = Potential management action required   = Management attention required

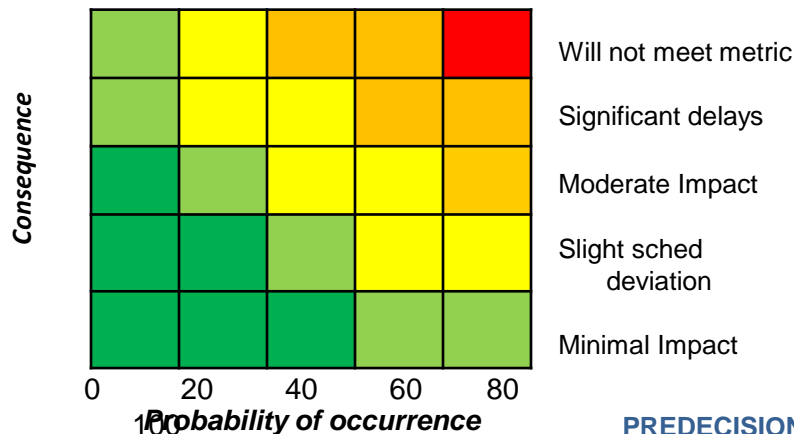# CDR Program Office
Obs4MIPS

Project Manager:
H. Semunegus

Weekly Status Update

- J. Baird prototyped a conversion utility.
- Scoping out a potential third dataset for initial transition.
- Test data was converted to Obs4MIPS format.
- Planning meeting completed and schedule revised.
- Initial datasets selected for Obs4MIPS: OISST and OLR
- Lots of emails and investigations ongoing.
- Many CDRs can't work in Obs4MIPS: all FCDRs and all Mean Layer Temperatures aren't fit for this purpose.
- Kickoff meeting held 7/18
- Initial plans developed.

Initial datasets: Daily OLR, OISST, Sea Ice

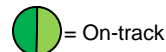| Task (team member)	Start Date	End Date	Duration (days)	Percent Complete
Obs4MIPS using CDRs (Project Manager: Hilawe Semunegus) Start Date: July 15, 2014				
1.1 Present project plan and time commitment to team members (all)	2014-07-15	2014-07-31	17	100%
1.2 Select 3 CDRs for Obs4MIPS conversion (all)	2014-07-15	2014-07-31	17	50%
1.3 Assess uncertainty estimates for selected CDRs based on CATBDs (J. Matthews)	2014-07-15	2014-07-31	17	0%
1.4 Assess time commitment for writing a "Technical Note Template" (SMEs): https://www.earthsystemcog.org/site_media/projects/obs4mips/Obs4MIPsTechnicalNoteGuidancev3.pdf	2014-07-15	2014-07-31	17	0%
1.5 Determine methodology for temporal and spatial upscaling/downscaling/averaging (SMEs and Jim Biard)	2014-07-15	2014-08-14	31	0%
2.0 Analysis (Sampling and validation)	2014-08-15	2014-11-14	92	0%
2.1 Create a sample monthly netCDF file for each Obs4MIPS-compliant CDR (Biard and SME)	2014-08-15	2014-09-14	31	0%
2.2 Independently compare sample output for scientific validation (SMEs and Biard)	2014-09-15	2014-10-14	30	0%
2.3 Validate that all metadata compliances are passed for sample files: CF, Obs4MIPS CMIP5 and CDR Metadata standards (Biard)	2014-10-15	2014-11-14	31	0%
3.0 Implementation (Code and documents)	2014-11-15	2015-02-28	106	0%
3.1 Produce Obs4MIPS CDRs for entire period of record (Biard and SMEs)	2014-11-15	2014-12-31	47	0%
3.2 Submit obs4MIPS Data Set Proposal Form (SMEs)	2015-01-01	2015-01-14	14	0%
3.3 Write Technical Note for each CDR (SMEs)	2015-01-01	2015-02-28	59	0%
4.0 Testing	2015-03-01	2015-04-30	61	0%
4.1 Test data scientifically (SMEs and Programmer)	2015-03-01	2015-03-31	31	0%
4.2 Test for monthly production (regular updates) of CDRs (within 10 days of succeeding month)	2015-03-15	2015-04-30	47	0%
5.0 Deployment (Archive)	2015-04-15	2015-10-31	200	0%
5.1 Complete Archive Request Form or ATRAC (SMEs, PM and Archive)	2015-04-15	2015-04-29	15	0%
5.2 Complete all Archive requirements (SMEs, PM and Archive)	2015-05-01	2015-07-31	92	0%
5.3 Serve CDRs via GFDL or NCDC ESG node (NOMADS-DAAB)	2015-08-01	2015-08-31	31	0%
5.4 UESB Product Briefing (SMEs)	2015-09-01	2015-09-15	15	0%
5.5 Add Obs4MIPS project to CDRP website				

Risk Matrix

Consequence (y-axis, top to bottom): Will not meet metric, Significant delays, Moderate Impact, Slight sched deviation, Minimal Impact

Probability of occurrence (x-axis): 0, 20, 40, 60, 80, 100

Risk and Mitigation

TBD

8/7/2014

= On-track   = Potential management action required   = Management attention required

CDR Program Office
UW HIRS Processing @ NCDC

Project Manager:
A. Young

Weekly Status Update

- Found space to temporarily store 10 TB of 10 yrs of product.
- Waiting for final code delivery from Wisconsin.
- Preparing plan for processing on CICS server.
- Working on finding space for the 10TB of input data (pixel level cloud data).
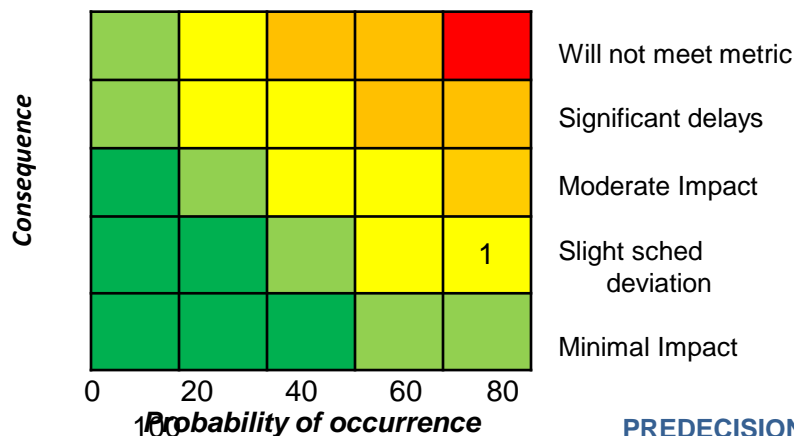
Objectives

Produce global total precipitable water and cloud top pressure estimates from HIRS data using the UW algorithm (P. Menzel).

Schedule

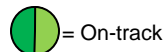- Start Date   TBD
- End Date   TBD

Risk Matrix

Consequence (y-axis): Will not meet metric, Significant delays, Moderate Impact, Slight sched deviation, Minimal Impact

Probability of occurrence (x-axis): 0 20 40 60 80 100

Risk and Mitigation

1. Programmer was assigned to another task. Impact: Schedule may slip.

= On-track   = Potential management action required   = Management attention required

CDR Program Office
Albedo of the Americas

Project Manager:
J. Matthews

Weekly Status Update

- Continued validation via collaboration with SAMSI (at NCSU).
- Loaned 42 TB of disk space allocation to ISCCP Project
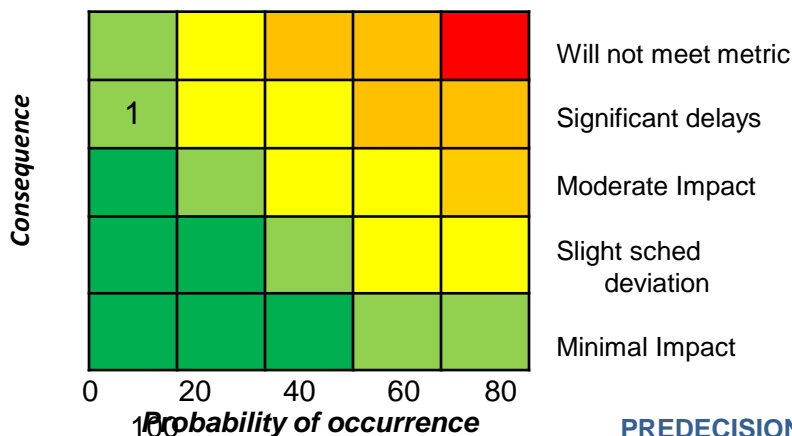
Objectives

Produce a daily land surface albedo product over North and South America from GOES-GVAR observations for 1995-2014.

Schedule

- Start Date   January 2015
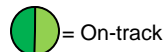- End Date   June 2016

Risk Matrix

Consequence (y-axis): Will not meet metric, Significant delays, Moderate Impact, Slight sched deviation, Minimal Impact

Probability of occurrence (x-axis): 0 20 40 60 80 100

Risk and Mitigation

1. Loaned disk space is not returned
   * Could cause delays. Unlikely since more disk space is planned.

PREDECISIONAL DRAFT INFORMATION

8/7/2014

= On-track   = Potential management action required   = Management attention required

CDR Program Office
OISST Rejuvenation Project
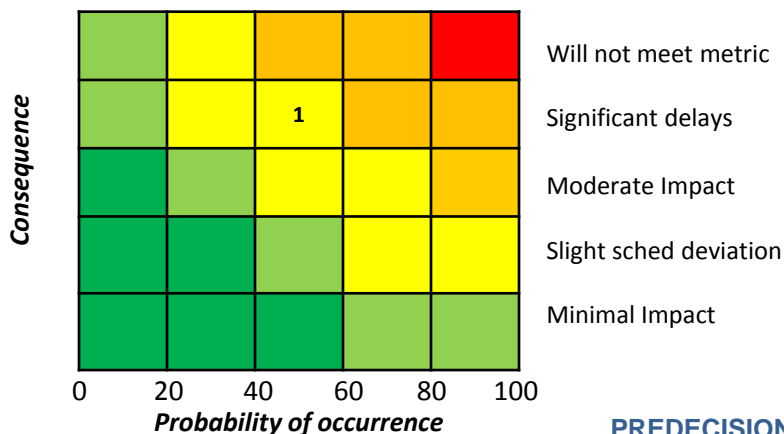
Team Lead:
Drew Saunders

Weekly Report – Sep 19, 2014

①ISST – Optimum Interpolated Sea Surface Temperature
- **Verified preliminary test run .**
- **Verifying results of final product test runs.**
- **DEV container is created and working to verify environment.**
- **Updating Project Plan with FOC estimates.**
- Performing dry runs for the System Acceptance Test (SAT).
- Draft OISST Transition to Operations Project Plan.
- Successfully completed 30 day parallel test.
- Comparing NCDC GTS with NCEP ship/buoy data for use. GCAD is resolving issues but requires new operational code.
- AVHRR data for the 15 day delay product is available from CLASS.
- GSTWG discussing inputs and production of preliminary OISST.
- Created a SOP for operational OISST.
- Completed refactoring of each component.
- Conducted Technology Assessment Review.

Monitor Project	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	NOV
Test		▭														
Dry Run SAT		▭														
Setup DEV			▭													
Verify DEV			▭													
Setup TEST			▯													
Dry Run TEST			▯													
SAT			▯													
FOC																

Risk Matrix

- Consequence (vertical axis), from top to bottom:
  - Will not meet metric
  - Significant delays
  - Moderate Impact
  - Slight sched deviation
  - Minimal Impact
- Probability of occurrence (horizontal axis): 0 20 40 60 80 100
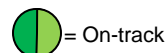- Risk **1** located at Significant delays / probability ~50

Risk and Mitigation

1 Time to progress through the three tier environment. ITB support is required.

PREDECISIONAL DRAFT INFORMATION

🟢 = On-track   🟡 = Potential management action required   🟠🔴 = Management attention required
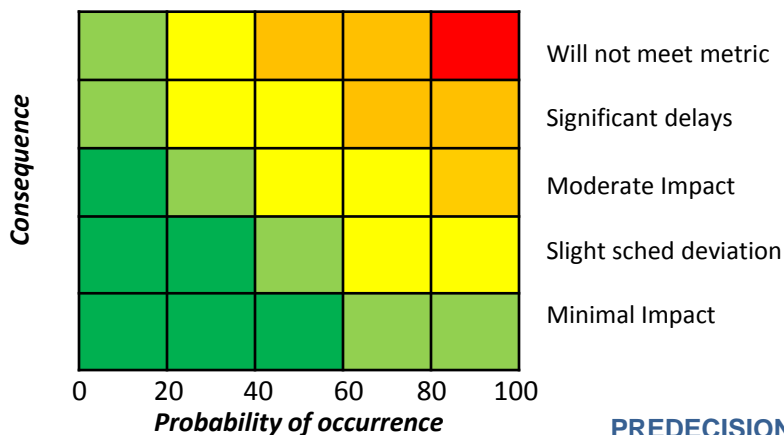
Weekly Report – September 19, 2014

① Operations Monitoring Tool development
- **Recommend delay until until October 1.**
- Designing module to collect status data from iRODS.
- Working on database design.
- Defined requirements for Phase 1 of the project.
- Phase 1 implements basic functionality .
- Additional datasets can be added in later phases.
- Updated the monitoring project plan.
- Monitoring of operational ingest.

Monitor Project	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	NOV
Phase 1																
Status View																
Dashboard																
Email Notification																
Phase II																

Risk Matrix

Will not meet metric

Significant delays

Moderate Impact

Slight sched deviation

Minimal Impact

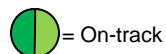*Consequence*

0   20   40   60   80   100

Probability of occurrence

Risk and Mitigation

PREDECISIONAL DRAFT INFORMATION

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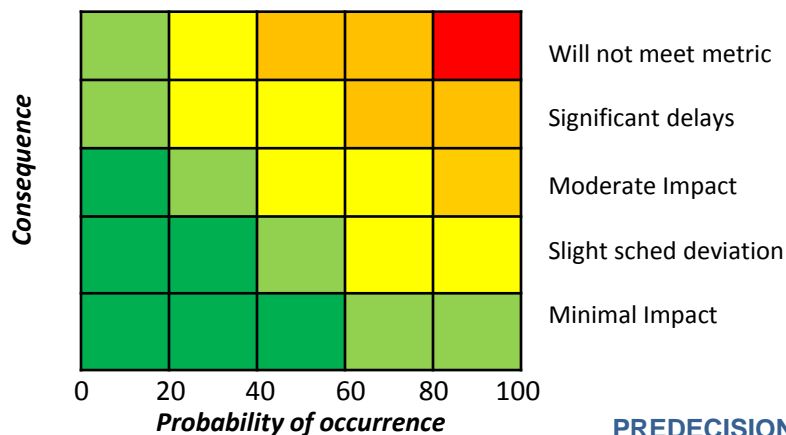
Weekly Report – September 19, 2014

1 **Federated Archive Search Tool proof-of-concept**

- **Significant progress on application to demonstrate query capabilities.**
- Connected all data to geographic and date references.
- Designed and loaded VIIRS catalog graph data.
- Designed and loaded Storm Events graph data.
- Loaded FIPS geographic data.
- Installed Neo4j graph database with spatial extension.

Monitor Project	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	NOV
Proof-of-concept		▇	▇													
Demonstrate		▇	▇													
Analysis				▇												
Recommendation				▇												

Risk Matrix

Consequence (y-axis, top to bottom):
- Will not meet metric
- Significant delays
- Moderate Impact
- Slight sched deviation
- Minimal Impact

Probability of occurrence (x-axis): 0 20 40 60 80 100

Risk and Mitigation

9/19/2014

PREDECISIONAL DRAFT INFORMATION

= On-track   = Potential management action required   = Management attention required
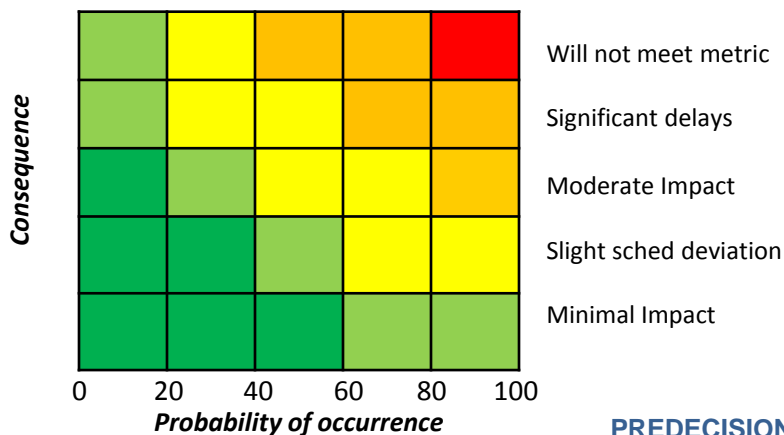
Weekly Report – September 19, 2014

1 **Reprocessing VIIRS SDRs**
- **Defined schedule estimates for project.**
- **Will create a schedule. Approximately 90 day/FTE.**
- **Present to Stewardship Council for information.**
- Talking with STAR scientists (Changyong Cao, etc) to identify parrallelization capability of VIIRS algorithms.
- Developed draft white paper to identify issues and scope.
- Have identified parts of the algorithm that need to 'conditioned' during runtime and will affect reprocessing estimates.
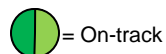- Discussed scope and goals of the project with CDRP scientist.

Risk Matrix

Consequence (vertical axis)

Rows (top to bottom):
- Will not meet metric
- Significant delays
- Moderate Impact
- Slight sched deviation
- Minimal Impact

X-axis: 0 20 40 60 80 100
Probability of occurrence

Risk and Mitigation